

An Apprenticeship and a Cult

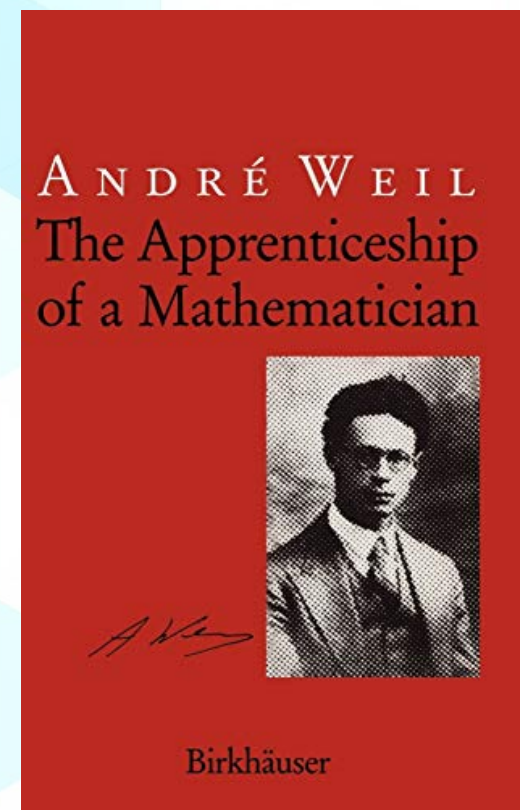
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Over the past couple of issues, we have published a lot of material on Nicolas Bourbaki and the mathematicians associated with the cult of Bourbaki. So, when I was thinking of some suitable books to write about in this column the choices became clear immediately. I wish to talk about two books that I had read back in 2014 when I was a student at ICTP in Trieste. The institute had an amazing library and it was an exciting time for me to be lost in all those books admiring the view of the Adriatic Sea as I sat in my favourite spot inside the library.

First off, we have **The Apprenticeship of a Mathematician** by **André Weil**. Great men (and women) write great books. André Weil was a great man, and he wrote many great books and *The Apprenticeship of a Mathematician* is one such book. I was very much moved by this book, which is a memoir of his early life



from the time of his birth till the end of World War II. Weil's standing as a math-

ematician extraordinaire is without question and I can hardly add anything of value about his work. But his life itself was also extraordinary to say the least.

Weil was a student at École Normale, one of France's most prestigious schools of learning and then become professor of mathematics at Aligarh Muslim University, Strasbourg, Sao Paolo, Chicago and finally the Institute for Advanced Study. The book is about his life through his apprenticeship as a mathematician, how he made important discoveries in his early life and how he spent a few months in prison during the outbreak of the second World War. He describes the events as best as his memory serves him and uses very little mathematics. The book is meant primarily for anyone with a tangential interest in mathematics and is extremely well written.

Weil also describes in great details his nurturing of the famous fictional mathematician Nicolas Bourbaki, whose mathematical texts, every mathematics student worth her name has at one point in time taken a peek into and come out all the wiser. I really enjoyed reading this book and it came at a time when my own mathematical journey was just beginning. Several anecdotes in the book have since stayed with me and I do recommend this book to students to get an idea of a little bit of the creative genius of Weil.

I first heard the name of Nicolas Bourbaki when I was in school and had developed an interest in mathematics. If memory serves me right, it was in one of the older issues of Ganit Bikash that I came across the name. From what little I read about him then, he seemed to be a mysterious secret mathematician, who was keen on transforming the mathematics education scenario at an upper university level. I knew that the books he wrote would be too much for me at that time, and so I forgot all about him. When I entered university and took a course in general topology, I chanced upon a book written by Bourbaki. Out of interest in what the man had to offer, I took a look at the book and it was an exhilarating experience for me. I had never seen a mathematics book like Bourbaki's before. It was terse and laconic.

That was several years ago, and in 2014 when I read Weil's *The Apprenticeship of a Mathematician*, the whole story of how the legend of Bourbaki was created came to the forefront. Weil was one of the founding members of this group of secret mathematicians who styled themselves after a French general and wrote mathematics textbooks that changed the way mathematics was viewed. This encouraged me to pick up a book in the ICTP library titled **Bourbaki: A Secret Society of Mathematicians** by Maurice Mashaal.

The book by Mashaal made for some interesting light reading. The book is for the non-specialist, for the laymen and so sometimes I found it too verbose when there was mathematics involved. The book explores in depth the evolution and influence of Nicolas Bourbaki. It is not one that takes one view or the other. The book is quite balanced and gives full details of many things that would have been difficult to trace about this secret mathematician. It discusses the opposing views towards Bourbaki and how he might have done as much good as he has done damage to the mathematics education in France and other parts of the world.

Although this was a nice read, still the mathematician in me was not satisfied. A book on a mathematician should have contained some more mathematics. The editing was not that good either, which is surprising for a book published by the AMS. However, one thing that must be mentioned is the presence of many colourful pictures which added much pleasure to the reading experience. There have been several articles and books written about Bourbaki and the people responsible for the myth, but Mashaal's book would be a good starting point as any if one is interested. The book ends with a beautiful line, which I would like to quote below:

Bourbaki did add a little to "the honour of the human spirit". In an era where sports and money are such great idols of civilization, this is no small virtue.

Books mentioned in this column:

- (1) **The Apprenticeship of a Mathematician**, André Weil, Birkhauser, 1992.
- (2) **Bourbaki: A Secret Society of Mathematicians**, Maurice Mashaal, American Mathematical Society, 2006.

We plan to continue this column on books and any feedback and suggestion for this would be welcome and can be sent directly to the author.

